

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Advanced Television Systems)	MB Docket 87-268
And Their Impact upon the)	
Existing Television Broadcast)	
Service)	

TO: Marlene Dortch, Secretary
Federal Communications Commission
Attn: The Commission

**COMMENTS OF THE MISSISSIPPI AUTHORITY FOR EDUCATIONAL
TELEVISION**

The Mississippi Authority for Educational Television (MAET), through its attorneys and pursuant to Section 1.415 of the rules, hereby files its Comments in response to the Commission's Seventh Further Notice of Proposed Rule Making (Notice) in the above-referenced proceeding proposing a new DTV Table of Allotments (TOA). In support thereof, the following is shown:

1. MAET is the statewide public broadcasting network licensed to provide public television service to the state of Mississippi. Toward that end, MAET operates eight full-service television stations. MAET is committed to making the transition from analog to digital service so that its constituents can realize the full benefits of digital television.
2. MAET has reviewed Notice with particular regard to the proposed allotments for MAET's facilities. MAET believes that, with one exception, the proposed allotments for its facilities are accurate and appropriate. As shown in

the attached Engineering Statement, MAET takes issue with the Commission's proposed parameters for Station WMAE-DT, Channel 12, Booneville, Mississippi. In particular, the directional antenna ID (74629) set forth in the proposed Final Table of Allotments for WMAE-DT does not correspond to the omnidirectional pattern certified by MAET in its Pre-Election Certification filed November 1, 2004. That pattern complies with the rules and constitutes the most effective and efficient configuration of DTV facilities for Station WMAE-DT. In this regard, attached hereto is an Engineering Statement prepared by MAET's consulting engineer demonstrating the benefits of omnidirectional operation. Specifically, omnidirectional operation will permit full replication by WMAE-DT without adversely impacting other proposed allotments or necessitating the needless expense of purchasing a custom antenna.

WHEREFORE, for the foregoing reasons, MAET respectfully requests that the TOA be amended as set forth herein.

Respectfully submitted,

MISSISSIPPI AUTHORITY FOR
EDUCATIONAL TELEVISION

By: _____
Malcolm G. Stevenson

SCHWARTZ, WOODS & MILLER
Suite 610
1233 20th Street, N.W.
Washington, D.C. 20036-7322
Its Attorneys

January 24, 2007

**ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR.
OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS
CONSULTING ENGINEERS IN CONNECTION WITH THE SEVENTH FURTHER NOTICE
OF PROPOSED RULE MAKING REGARDING THE PARAMETERS ASSIGNED IN
THE PROPOSED DTV TABLE OF ALLOTMENTS FOR THE MISSISSIPPI
AUTHORITY FOR EDUCATIONAL TELEVISION POST-TRANSITION DIGITAL
TELEVISION BROADCAST FACILITY, WMAE-DT CHANNEL *12, BOONEVILLE, MS.**

The firm Kessler and Gehman Associates, Inc. was retained by the Mississippi Authority for Educational Television (MAET), Jackson, Mississippi to review the WMAE-DT Channel *12 post-transition facility's technical parameters assigned in the FCC's proposed DTV Table of Allotments (TOA) contained in the Seventh Further Notice of Proposed Rule Making (7th FNPRM) and to prepare comments for filing if detailed engineering studies reveal inaccuracies with respect to the proposed technical parameters.

Discussion

MAET is licensed to operate the WMAE-TV Channel *12 analog facility with a maximum effective radiated power (ERP) of 100 kW with an antenna height radiation center of 226 meters above average terrain (AAT) using a Harris model TAB-12H directional antenna (BLET-20001011ABQ). MAET is also authorized to operate the WMAE-DT Channel *55 out-of-core facility with a maximum ERP of 1,000 kW with an antenna height radiation center of 227 meters AAT using a Dielectric model TFU-36GTH O6 nondirectional antenna (BPEDT-20000501AHZ).

The FCC released the 7th FNPRM on October 20, 2006 which included the proposed DTV Table of Allotments. In the 7th FNPRM, it states that interested parties may file comments on or before January 11, 2007 (now extended to January 25th) with respect to the proposed DTV Table and asks that licensees review the accuracy of their information contained in the proposed

DTV Table, including comments on any inaccuracies or discrepancies. In its Pre-Election Certification application, MAET certified that it would operate its post-transition DTV station as authorized by its digital construction permit (BPEDT-20000501AHZ) which authorizes a nondirectional antenna; however, the Antenna ID depicted in the proposed DTV TOA (74629) assigns a directional pattern for the WMAE-DT Channel *12 post-transition facility (Exhibit 1). In its Digital Channel Election application (First Round Election), MAET elected to release digital Channel *55, because it is an out-of-core channel, and elected to revert back to Channel *12 for its post-transition digital operation. Accordingly, the FCC assigned WMAE-DT Channel *12 in the proposed DTV TOA.

Referring to Exhibit 2, it can be seen that the proposed DTV TOA facility's protected F(50,90) 36.0 dBuV/m noise limited contour for the WMAE-DT facility (red contour) would fall short of replicating its certified digital F(50,90) 42.4 dBuV/m noise limited (blue contour) due to the proposed directional antenna. The directional antenna assigned in the proposed DTV TOA for WMAE-DT would result in an estimated minimum service population loss of 5,268 persons based on U.S. Census 2004 Estimation Data and this does not even take into consideration the additional losses of the population that would be served outside the protected noise limited contour. The directional azimuth pattern assigned to the WMAE-DT Channel *12 post-transition facility in the proposed DTV TOA could force MAET into purchasing a custom antenna to meet the FCC specified azimuth pattern relative field values instead of purchasing a much cheaper "off the shelf" nondirectional antenna.

Referring to Exhibit 3, it can be seen that the red F(50,90) 36.0 dBuV/m noise limited contour, representing the Final DTV TOA for the post-transition WMAE-DT Channel *12 facility, would fully replicate the authorized WMAE-DT Channel *55 F(50,90) 42.4 dBuV/m protected contour (blue contour), as certified in the Pre-Election Certification application, if the post-transition WMAE-DT Channel *12 facility were operating with a nondirectional antenna using the ERP and antenna height assigned in the proposed DTV TOA. Therefore, MAET respectfully requests that the assigned antenna azimuth pattern be changed from directional to

nondirectional so that it can serve the population that would be served by its authorized out-of-core digital facility.

It has been determined that a nondirectional antenna would have no impact on other proposed allotments. Exhibits 4 and 5 depict a Longley-Rice interference study map and predicted interference percentage calculations respectively with the WMAE-DT post-transition Channel *12 facility operating with a nondirectional antenna and all other parameters remaining as assigned in the proposed DTV TOA. It can be seen that the only station predicted to receive interference greater than 0.0% from the nondirectional WMAE-DT post-transition Channel *12 facility is the WHBQ-DT post-transition Channel 13 facility which would be predicted to receive only 0.2% interference. Exhibits 6 and 7 depict a Longley-Rice interference study map and predicted interference percentage calculations respectively with the WMAE-DT post-transition Channel *12 facility operating with the assigned parameters in the proposed DTV TOA which includes the assigned directional pattern (Antenna ID 74629). Again, it can be seen that the only station predicted to receive interference greater than 0.0% from the directional WMAE-DT post-transition Channel *12 facility is the WHBQ-DT post-transition Channel 13 facility which would still be predicted to receive only 0.2% interference. Therefore, changing the proposed DTV TOA from a directional to nondirectional azimuth pattern for the WMAE-DT post-transition Channel *12 facility would have no impact on other proposed allotments.


In conclusion, MAET requests that the antenna azimuth pattern assigned to the WMAE-DT Channel *12 post-transition facility in the proposed DTV TOA be changed from directional to nondirectional as certified in its Pre-Election Certification application so that WMAE will be able to serve the population that would be served by its out-of-core digital facility. The directional pattern assigned to WMAE in the proposed DTV TOA would result in thousands of viewers losing service which would not be in the public's best interest. Changing the proposed DTV TOA from a directional to nondirectional azimuth pattern for the WMAE-DT post-transition Channel *12 facility would have no impact on other proposed allotments.

Certification

This technical statement was prepared by William T. Godfrey, Jr., Telecommunications Technical Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.

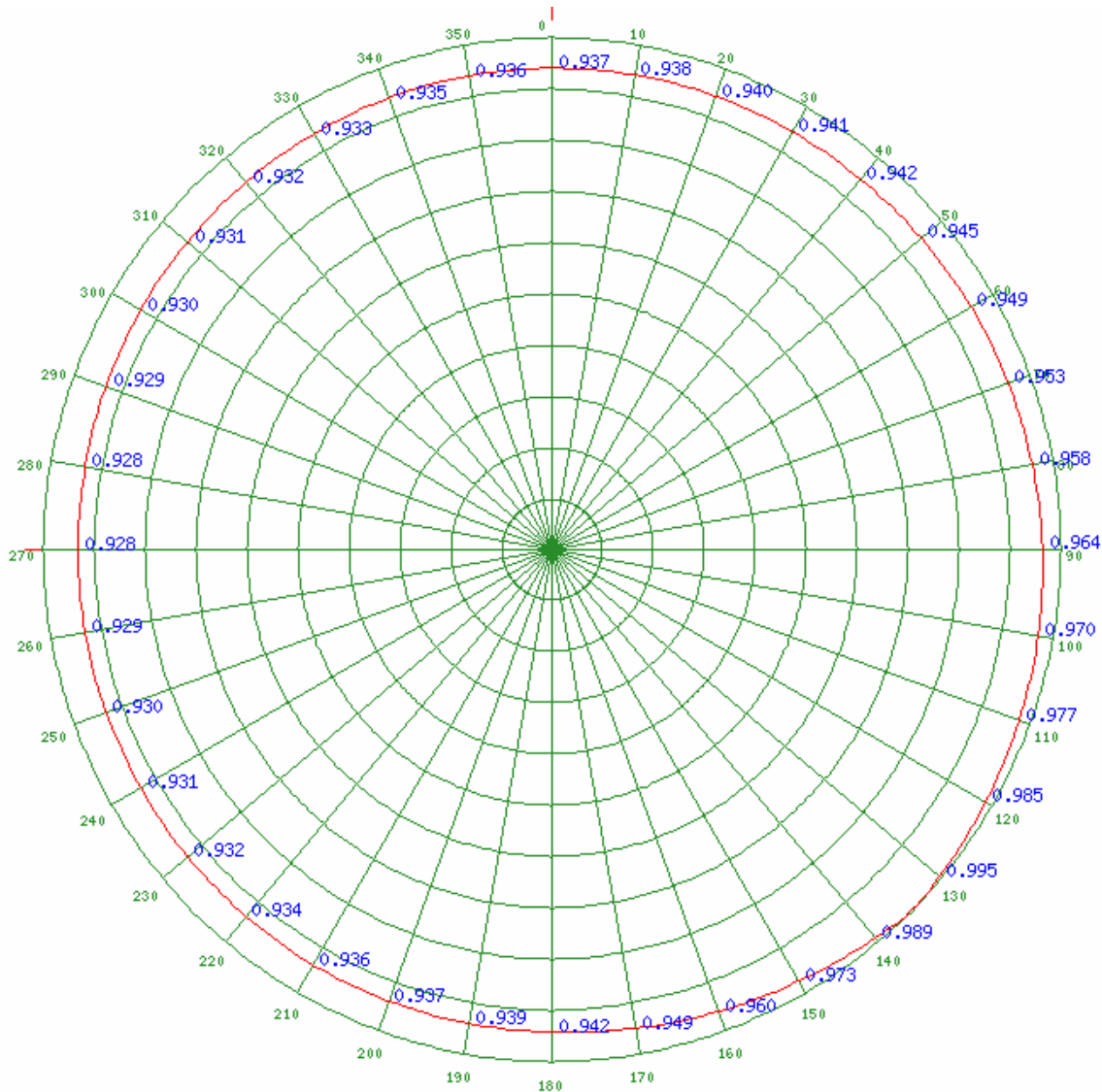

WILLIAM T. GODFREY, JR.
Telecommunications Technical Consultant

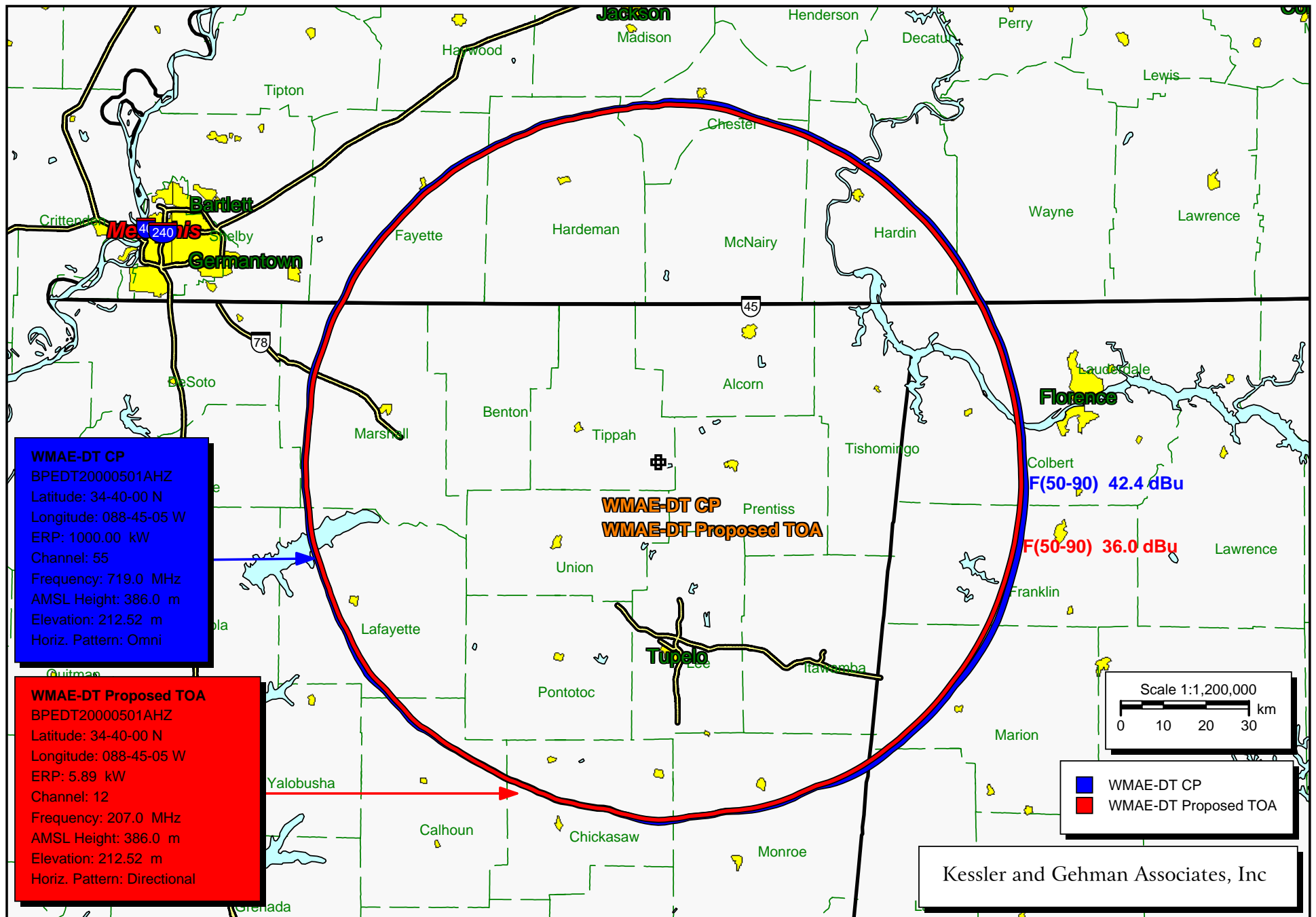
18 January, 2007

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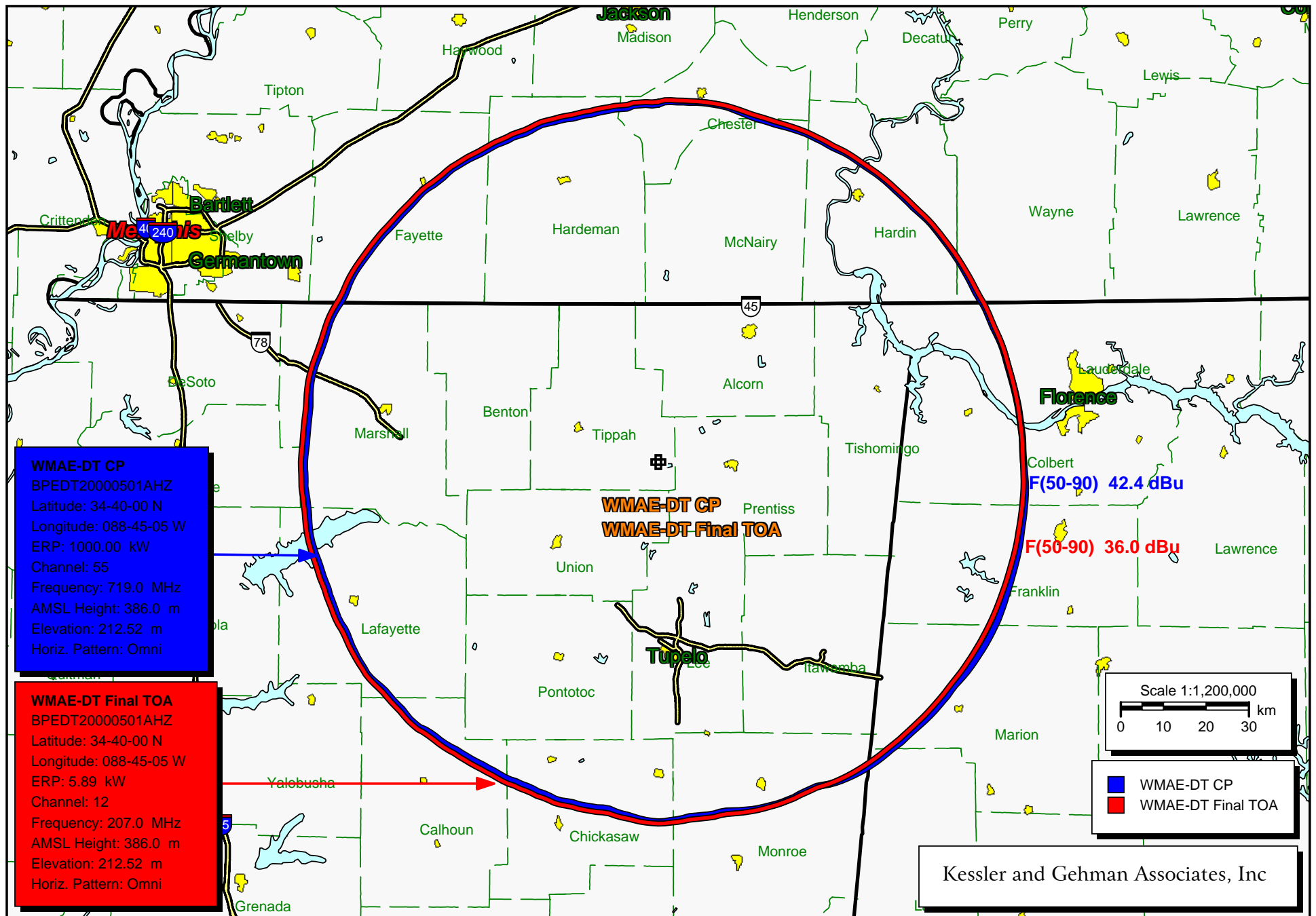
Antenna Make		Model				Service		Antenna Id			
D55		MSBOONEVILL_12				DT		74629			
Antenna relative field values:											
0°	0.937	10°	0.938	20°	0.94	30°	0.941	40°	0.942	50°	0.945
60°	0.949	70°	0.953	80°	0.958	90°	0.964	100°	0.97	110°	0.977
120°	0.985	130°	0.995	140°	0.989	150°	0.973	160°	0.96	170°	0.949
180°	0.942	190°	0.939	200°	0.937	210°	0.936	220°	0.934	230°	0.932
240°	0.931	250°	0.93	260°	0.929	270°	0.928	280°	0.928	290°	0.929
300°	0.93	310°	0.931	320°	0.932	330°	0.933	340°	0.935	350°	0.936
Additional Azimuths:											
136°		1									

Relative Field Polar Plot





WMAE-DT Proposed DTV Table of Allotments Verification



WMAE-DT replicates NTSC with omni antenna

EXHIBIT 3

Outgoing Interference Population Report

WMAE-DT Final TOA (12) Booneville, MS
 Broadcast Type: Digital
 Lat: 34-40-00 N Lng: 088-45-05 W ERP: 5.89 kW AMSL: 386.0 m
 TV Outgoing Interference Study
 Signal Resolution: 2.0 km
 Consider NTSC Taboo: Yes
 # of radials computed for contours: 72
 Contours calculated using 8 radial HAAT.
 LR Profile Spacing Increment: 1.0 km

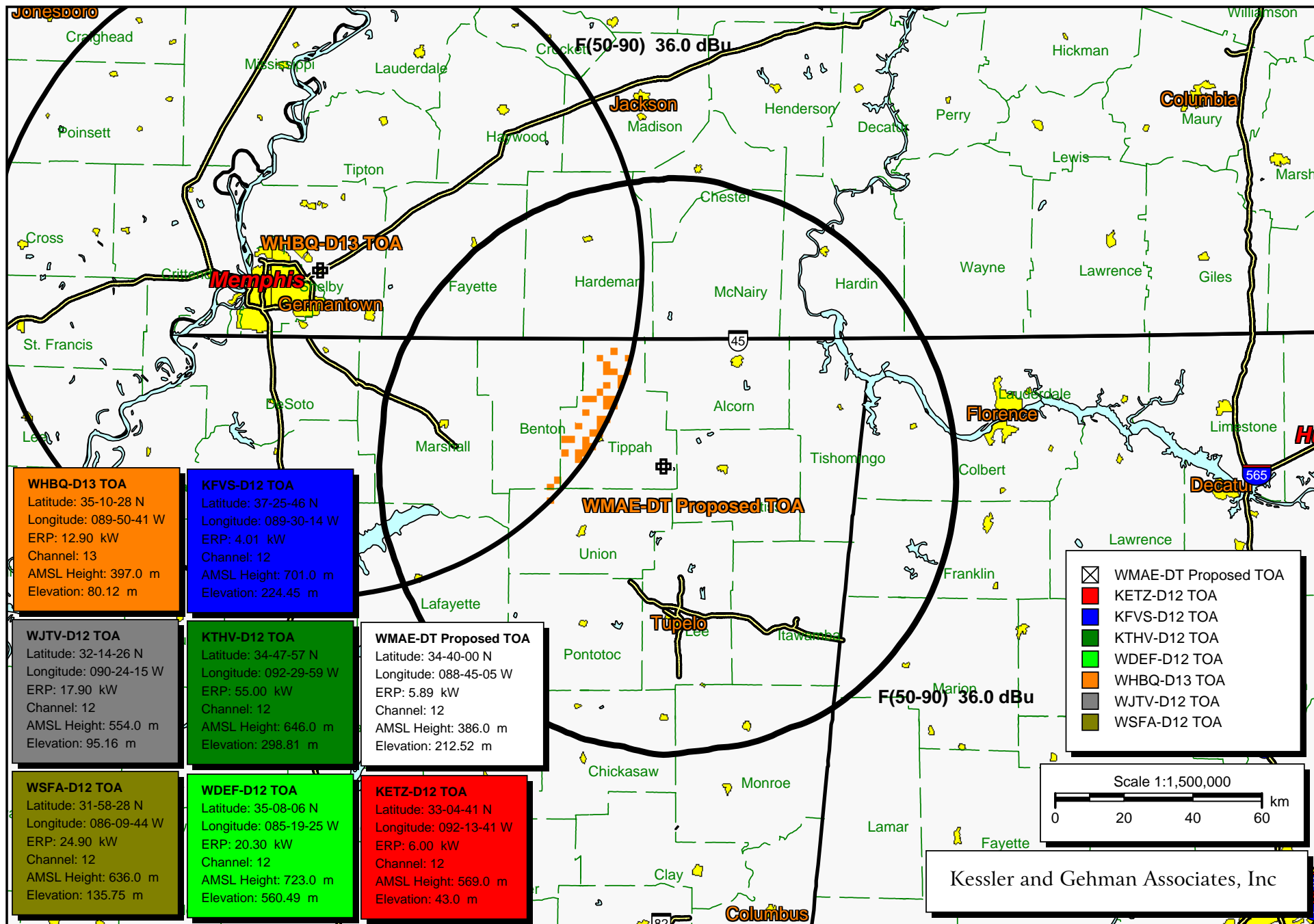
Primary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

----- Stations Considered:

Call Letters	City	State	Dist	Bear
KETZ-D12 TOA (12)	El Dorado	AR	366.7	242.3
KFVS-D12 TOA (12)	Cape Girardeau	MO	313.9	347.7
KTHV-D12 TOA (12)	Little Rock	AR	343.5	273.5
WDEF-D12 TOA (12)	Chattanooga	TN	317.5	79.6
WHBQ-D13 TOA (13)	Memphis	TN	114.7	299.7
WJTV-D12 TOA (12)	Jackson	MS	309.8	210.2
WSFA-D12 TOA (12)	Montgomery	AL	383.7	140.4

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
KETZ-D12 TOA (12)	0.0	0	450,183	0	0	0.0
KFVS-D12 TOA (12)	3.9	0	703,904	0	0	0.0
KTHV-D12 TOA (12)	4.0	10	1,171,374	0	28	0.0
WDEF-D12 TOA (12)	12.0	163	1,381,741	0	406	0.0
WHBQ-D13 TOA (13)	156.4	1,185	1,481,986	0	2,753	0.2
WJTV-D12 TOA (12)	8.2	12	829,967	0	27	0.0
WSFA-D12 TOA (12)	0.0	0	802,863	0	0	0.0



WMAE-DT Channel 12 Outgoing Longley-Rice Interference Study Using Proposed DTV TOA Parameters

Outgoing Interference Population Report

WMAE-DT Final TOA (12) Booneville, MS

Broadcast Type: Digital

Lat: 34-40-00 N Lng: 088-45-05 W ERP: 5.89 kW AMSL: 386.0 m

TV Outgoing Interference Study

Signal Resolution: 2.0 km

Consider NTSC Taboo: Yes

of radials computed for contours: 72

Contours calculated using 8 radial HAAT.

LR Profile Spacing Increment: 1.0 km

Primary Terrain: 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Stations Considered:

Call Letters	City	State	Dist	Bear
KETZ-D12 TOA (12)	El Dorado	AR	366.7	242.3
KFVS-D12 TOA (12)	Cape Girardeau	MO	313.9	347.7
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WHBQ-D13 TOA (13)	Memphis	TN	114.7	299.7
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Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
KETZ-D12 TOA (12)	0.0	0	450,183	0	0	0.0
KFVS-D12 TOA (12)	0.0	0	703,904	0	0	0.0
KTHV-D12 TOA (12)	4.0	10	1,171,374	0	28	0.0
WDEF-D12 TOA (12)	12.0	163	1,381,741	0	406	0.0
WHBQ-D13 TOA (13)	144.4	1,161	1,481,986	0	2,703	0.2
WJTV-D12 TOA (12)	8.2	12	829,967	0	27	0.0
WSFA-D12 TOA (12)	0.0	0	802,863	0	0	0.0